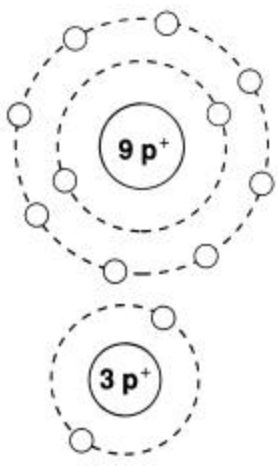
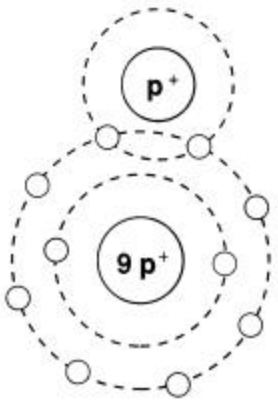


CHEMICAL BONDS

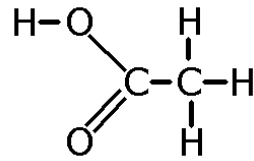
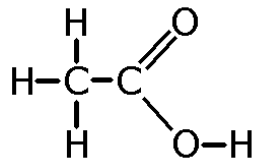
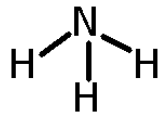
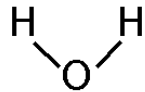
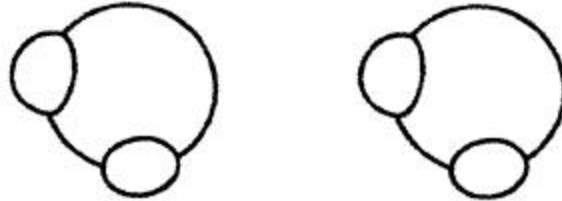
DEFINITION/DESCRIPTION:

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TYPES:

	
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TYPES:



QUESTIONS:

1. Define the following terms:

Valence Electron	
Valence Shell	

2. How is the chemical behavior of an atom determined by its electron configuration?

3. Why do atoms form chemical bonds?

4. Identify the type of bond described in each of the following. Use the key below to indicate your answers.

A. Covalent, polar
B. Covalent, nonpolar

C. Hydrogen
D. Ionic

_____ Strongest bonds

_____ Weakest type of bond

_____ Bonds formed by the complete transfer of electrons from atom to another

_____ Bonds formed by the equal sharing of electrons between two atoms

_____ Bonds formed by the unequal sharing of electrons between two atoms

_____ Attraction between oppositely charged portions of two different polar molecules

_____ C—C

_____ Na—Cl

_____ H—C

_____ P—O

_____ C—O

_____ N—H

5. How can you determine if the bond between two atoms is polar covalent, nonpolar covalent, or ionic?

6. How is the shape of a molecule important in biological systems?

7. Match the description with the correct term.

- | | |
|--------------------------------|-----------|
| _____ Charged atom or molecule | A. Anion |
| _____ Negatively charged ion | B. Cation |
| _____ Positively charged ion | C. Ion |

8. How many electrons are shared between the atoms in each of the following:

Chemical Bond	# of e- shared	Chemical Bond	# of e- shared
C-C		N≡N	
O=O		H-C	

9. What is the biological importance of weak bonds?

10. What is the meaning of the following statement: "Nonpolar covalent bonds and ionic bonds are two extremes of a continuum."
